

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF COLUMBIA GAS OF)	
KENTUCKY, INC. FOR APPROVAL OF A)	
STATISTICAL SAMPLE METER TEST PLAN)	CASE NO. 96-010
FOR RESIDENTIAL, INDUSTRIAL AND)	
COMMERCIAL CLASS METERS PURSUANT TO)	
807 KAR 5:022, SECTION 8(5)(C))	

O R D E R

On January 10, 1996, Columbia Gas of Kentucky, Inc. ("Columbia") filed an application requesting approval of a statistical meter sampling plan for residential gas meters pursuant to 807 KAR 5:022, Section 8(5)(c). Granting approval will allow Columbia to deviate from the testing requirements of 807 KAR 5:022, Section 8(3), 8(5)(a), and 807 KAR 5:006, Section 16(1).¹ Columbia proposes to include commercial and industrial gas meters and requests Commission approval of the plan as a pilot program for a period of 5 years. The plan, attached as an Appendix to this Order, is based on Military Standard 105D, Sampling Procedures and Tables for Inspection by Attributes ("Military Standards"). Columbia also requests a deviation from Commission regulation 807 KAR 5:022 Section 8(3)(a)(1), to test samples of new or

¹ Columbia was previously granted a deviation from the testing requirements of 807 KAR 5:022, Section 8(5)(a)(1) and (3) in Case No. 9491, The Application of Columbia Gas of Kentucky, Inc., for Permission to Deviate from the Requirements of 807 KAR 5:022, Section 8(5)(a) 1 and 3 of the Commission's Rules, Final Order dated April 23, 1986. The approval granted herein nullifies the deviation previously granted in Case No. 9491.

remanufactured gas meters under the terms of the plan in lieu of 100 percent testing required under the regulation.

After consideration of the record and being otherwise sufficiently advised, the Commission finds that Columbia's plan should be accepted for a pilot period of 5 years and, further, that Columbia's requested deviation from 807 KAR 5:022, Section 8(3)(a)(1), should be granted.

Columbia estimates annual savings of \$362,000 from implementing the sampling test plan, as compared to the costs of current periodic testing.

Columbia states that the safety inspection of a customer's service line at the time a meter is removed will continue under the new plan.

Columbia should file an annual report with the Commission which would include at minimum identification and test results of each control group, test results for the new meters including the manufacturer's test records, evaluation and analysis of the data, corrective actions taken for the groups that do not meet the criteria, cost savings, safety measures, and overall efficiency of the plan.

IT IS THEREFORE ORDERED that:

1. Columbia's request for approval under 807 KAR 5:022, Section 8(5)(c), of its statistical sampling plan for testing gas meters is granted for a period of 5 years from the date of this Order. The approval granted herein constitutes a deviation from

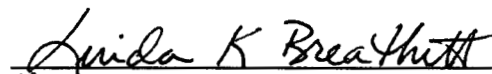
testing requirements set forth in 807 KAR 5:022, Section 8(3)(a)(1), 8(5)(a) and 807 KAR 5:006, Section 16(1).

2. Columbia shall file its evaluation of the plan with the Commission along with any application to continue the plan or a notice of discontinuance of the plan no later than April 1, 2001.

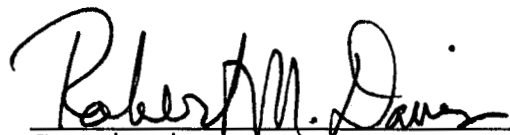
3. Within 30 days of the date of this Order, Columbia shall notify the Commission of the time frame for implementation of the plan. Columbia shall file its first annual report no later than April 1, 1997 and subsequent reports within 12 months thereafter.

Done at Frankfort, Kentucky, this 14th day of May, 1996.

PUBLIC SERVICE COMMISSION


Chairman


Vice Chairman


Commissioner

ATTEST:


Executive Director

APPENDIX

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 96-010 DATED MAY 14, 1996

DESCRIPTION OF COLUMBIA GAS OF KENTUCKY'S

SAMPLE TESTING PLAN

Classes of Meters. Residential class meters are defined as positive displacement meters which measure gas flow up to and including 500 cfh. Commercial class positive displacement meters measure gas flow 501 cfh to and including 1,500 cfh. Industrial class positive displacement meters measure gas flow over 1,500 cfh.

Control groups. Gas meters will be divided into homogeneous control groups and each group will be between one and ten thousand gas meters. A sample will be drawn randomly from each control group, with the sample size determined by the size of the control group and the table of sample size code letters for normal inspection level II of the Military Standards.

Regardless of the group size, the minimum size for residential meters will be 32 meters or the number of group, if smaller. Since the group size for commercial and industrial meters will usually be small, the minimum sample size will be determined by inspection level II of single sample plans for the applicable inspection in the master table of the Military Standards.

Testing in service meters. A control group of in service meters will be tested according to the table for a single sample plan, normal inspection level, with an acceptable quality level ("AQL") of 6.5 and accuracy level of ± 2 percent. Meters in the control group will be selected randomly for testing by using random number generator software from the meter database to ensure that

all meters in the control group will have an equal chance to become part of the sample.

Table 1 listed herein indicates the group size, sample size, accept and reject levels in accordance with Military Standards at AQL of 6.5 for normal inspection in the master table.

CONTROL GROUP	SAMPLE SIZE	ACCEPT	REJECT
2 TO 8	2	0	1
9 TO 15	3	0	1
16 TO 25	5	0	1
26 TO 50	8	1	2
51 TO 90	13	2	3
91 TO 150	20	3	4
151 TO 280	32	5	6
281 TO 500	50	7	8
501 TO 1200	80	10	11
1201 TO 3200	125	14	15
3201 TO 10000	200	21	22

TABLE 1 - SINGLE SAMPLING PLAN FOR NORMAL INSPECTION

Performance of a control group is acceptable when the number of meters in the sample test within an accuracy level of ± 2 percent for all test flow rates: do not exceeds the accept number in Table 1. The control group is rejected if the number of meters rejected in the sample equals or exceeds the rejected number in Table 1.

An accepted control group will remain in service until all meters within the group have been removed by attrition or service life limitations of the group. A rejected control group will be removed according to the plan's early removal program.

When a control group is rejected, all meters within the group will be removed from service within 18 months. However, a sub-group within the control group may be identified for poor performance while the remaining group is tested and proven to be acceptable. In such case, the sub-group will be removed within 12 months, while the remaining meters in the original control group remain in service.

Reduced inspection for in service meters. In order to provide an incentive for high quality performance in a control group, the plan includes reduced testing, or a reduced inspection level, which is implemented according to Table 2 of the Military Standards listed herein. Single sampling plan for reduced inspection require that ten consecutive successful testing of the group and no sample is rejected during the normal level inspection; and the total number of meters rejected in each of the samples is no greater than the applicable number in Table 2.

CONTROL GROUP	SAMPLE SIZE	ACCEPT	REJECT
5 TO 25	2	0	1
26 TO 50	3	0	1
51 TO 90	5	1	2
91 TO 150	8	1	2
151 TO 280	13	2	3
281 TO 500	20	3	4
501 TO 1200	32	5	6
1201 TO 3200	50	7	8

TABLE 2 - SINGLE SAMPLING PLANS FOR REDUCED INSPECTION

When a control group or sub-group is subject to a reduced inspection, the normal inspection level is implemented if the

control group or sub-group is rejected. Table 2 provides the range of group sizes, sample sizes, and the accept and reject limits when a reduced inspection is instituted. The number of meters in a control group subject to reduced inspection will not exceed 3,200 meters and the minimum sample size for residential meters will be 32 meters.

Tightened inspection for in service meters. When normal inspection is in effect, tightened inspection shall be instituted when a control group is operating within the high limits of the specified acceptable limits for five consecutive tests. Table 3 of the Military Standards for single sampling plan for tightened inspection is implemented. The minimum sample size for residential meters will be 32 meters or the number of the control group.

Group Size	Sample Size	Accept (AC)	Reject (RE)
2 - 8	2	0	1
9 - 15	3	0	1
16 - 25	5	0	1
26 - 50	8	1	2
51 - 90	13	1	2
91 - 150	20	2	3
151 - 280	32	3	4
281 - 500	50	5	6
501 - 1,200	80	8	9
1,201 - 3,200	125	12	13
3,201 - 10,000	200	18	19

TABLE 3 - SINGLE SAMPLING PLAN FOR TIGHTENED INSPECTION

Testing new meters. The plan includes sample testing of group of new meters in accordance with Table 4 of the Military Standards,

normal inspection level II, and an AQL of 1.0 to insure an accuracy average of 99 percent. All new meters purchased by Columbia will be tested by the manufacturer before shipment to Columbia. A copy of the manufacturer's test records for new meters will be filed with the Commission in the annual sampling plan report. If the sample from any group fails the test, the entire group will be rejected.

CONTROL GROUP	SAMPLE SIZE	ACCEPT	REJECT
2 TO 8	2	0	1
9 TO 15	3	0	1
11 TO 25	5	0	1
26 TO 50	8	0	1
51 TO 90	13	0	1
91 TO 150	20	0	1
151 TO 280	32	1	2
281 TO 500	50	1	2
501 TO 1200	80	1	2
1201 TO 3200	125	2	3
3200 TO 10000	200	3	4

TABLE 4 - SINGLE SAMPLING PLANS FOR NEW METERS

Annual report. Columbia will file with the Commission an annual report which will include at minimum identification and test results of each control group, test results of for the new meters including the manufacturer's test records, evaluation and analysis of the data, and any corrective action taken. Columbia will also address cost savings, safety measures, and overall efficiency of the sampling plan.

Safety issues. In response to concerns that safety inspections normally triggered by the testing requirements of the Commission's regulations will not be performed as scheduled, or that overall safety of customer service may decline as a result of the proposed plan, Columbia proposes to enter onto the customer's property as required by Columbia's Operations and Maintenance Plan and address safety issues. Columbia distributes a booklet providing general information and gas safety tips to new customers. During gas meter installation on a customer's premises, the service regulator is checked in conjunction with the customer service line survey which is conducted every first, third or fifth year.